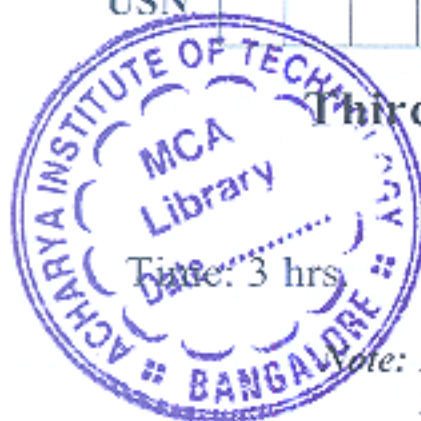




Third Semester MCA Degree Examination, June/July 2025

Data Analytics using Python

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Explain the following with syntax and example : i) Finite and infinite loop ii) Decision control flow statement.	10	L2	CO1
	b.	Explain with syntax and example different types of python datatypes and type() function.	10	L2	CO1
OR					
Q.2	a.	What is a Function? Mention its types. Write a types program to add two numbers using function, read input from the user.	10	L3	CO1
	b.	Explain the following : i) Arguments *args and **kwargs ii) Default parameter and keyword arguments.	10	L2	CO1
2					
Module – 2					
Q.3	a.	Write a program to search an element from list.	10	L3	CO2
	b.	Differentiate between sets, tuples and dictionaries.	10	L2	CO2
OR					
Q.4	a.	Explain string, Basic String Operations, indexing and slicing, method used with examples.	10	L2	CO2
	b.	Explain constructor and inheritance. Demonstrate constructors in inheritance with the help of python program. Take input as student name, subject name, marks of three subjects and calculate the percentage.	10	L3	CO2
Module – 3					
Q.5	a.	Explain Reading and Writing data in text format in Python with example.	10	L2	CO3
	b.	Write a note on interacting with Database.	10	L2	CO3
OR					
Q.6	a.	Explain combining and merging datasets with an example.	10	L2	CO3
	b.	Explain String manipulation using the regular expression methods.	10	L2	CO3
Module – 4					
Q.7	a.	Explain Data Acquisition by Scrapping web application.	10	L2	CO4
	b.	Explain the following with example : i) Submitting a form ii) Fetching web pages.	10	L2	CO4
1 of 2					

OR

Q.8	a.	Explain specialized universal functions : i) Trigonometric ii) Exponents and logarithms with necessary coding.	6	L2	CO4
	b.	Explain with example numpy array splitting.	4	L2	CO4
	c.	Develop a python program to perform arithmetic operations on numpy array.	10	L3	CO4

Module – 5

Q.9	a.	Differentiate between Matplotlib and Seaborn. Write a code to plot a line plot and scatter in Seaborn.	10	L3	CO4
	b.	Write a python program to demonstrate Time Series analysis with pandas.	10	L3	CO4

OR

Q.10	a.	Explain Advance Data Visualization with Seaborn. Write a code to demonstrate Data Visualization using Seaborn.	10	L3	CO4
	b.	What is Matplotlib? Explain the different plotting functions in pandas with syntax and example.	10	L3	CO4
